

SOME CAPTURES OF NOTABLE ABERRATIONS OF LEPIDOPTERA

Recorded recently by Members of the Amateur Entomologists' Society.

Plate III.

- Fig. (a). A gynandrous *Pieris napi*, ab. *citronnea*, bred by L. G. Waddington, August 1943.
- Fig. (b). A partially melanic example of *Polygonia c-album* taken by R. S. Ferry, Wellwyn, Herts, 3.viii.43.
- Fig. (c). A *Limenitis camilla* with asymmetrical white bands taken by L. B. Clarke in Glos., 2.vii.1944 (photo. E. G. Neal).
- Fig. (d). *X. zollikoferi*, taken by A. Kennedy, at sugar, Kirkstall, Leeds, 29.viii.39.
- Fig. (e). A Noctuid taken near York by William Hewitt, about 1900. Now in the collection of A. Smith. Mr Tams (Brit. Mus.) has been unable to determine it.
- Fig. (f). *Xanthorhoë montanata*, a new aberration taken by A. Kennedy at Kirkstall, Leeds, vi.1942. See Dr E. A. Cockayne (*Ent. Record.*)
- Fig. (g). *Lampropteryx suffumata*, ab. *porrittii*, taken by A. Smith, Bishop's Wood, Selby, Yorks, April 1942.

The Plate and accompanying letterpress were very kindly lent to us by the Society: a useful item on the "Journal of Variation" side of our Magazine.

**70 NEW RECORDS OF LEPIDOPTERA FROM IRAN
 AND A FEW OTHER NOTES ON PERSIAN RHOPALOCERA.**

By E. P. WILTSHIRE, F.R.E.S.

The Lepidoptera of Iran (Persia) have, within the last decade, been intensively collected and studied, but the war has intervened to prevent consultation between the scattered students and to delay even the piecemeal publication of their results. If all their material survives the present world conflagration, it will make possible a very comprehensive Faunal List for Persia. At present anything so ambitious is not to be attempted.

Yet it is desirable, for the sake of zoogeographers and others, to report fairly promptly the discovery in Persia of species not previously known to occur there, and this is the primary object of the present short paper. It reports my capture there of 70 Macro-Lepidoptera new to Persia, which is of course a very small fraction of the total species I have observed there. Several of those included have already been mentioned as occurring in Persia in articles by me on Syria or Iraq or on general insect phenology and ecology, but a student compiling a Persian faunal list might not think of referring to those articles and would find it helpful to have those records collected here in one article; he would, however, also have to refer to the "A" works listed in the bibliography at the end of this article, if his list was to be complete, for the species listed in those works are omitted here, except for a few Rhopalocera, included here in order to correct mistakes recently published about them or, in one case (e.g. *louristana*, Le Cerf) to report the rediscovery of a rare

race in a new locality; these exceptions are in brackets and not numbered below. Detailed discussion of the prevailing form or range of variation is deliberately avoided, though the race-name is given where it could be ascertained in my preliminary study of the material. Ecological details are also omitted, but the bibliography mentions some works in which Persian biotopes are described. The locality of each record is however given, with its province or location in Persia, and a brief indication of the habitat of the species.

Of these new records, the most surprising are perhaps those of species previously considered purely European. Less surprising are the Northerly species such as *M. aurinia*, already known from further East. These two categories of Northerly species occur in Persia mostly on peaks or in cool oases in the North. It is also less surprising to discover in Persia the more Southerly species, especially since some of these were already known to occur both to the West and the North-East (e.g. *Agrotis lasserrei* (Pan-Eremic) and *Lithophane lapidea* (Mediterranean)). The discovery of species known previously only from Turkey (e.g. *E. theresiae*) or Turkestan (*L. amoenata*) is also less surprising, though interesting. The discovery in S. Persia, of Middle-East Eremic species such as *C. aurivillii*, was also not unexpected.

ANNOTATED LIST.

RHOPALOCERA.

(*Iphielides podalirius*, L., ssp. *persica*, Verity. Common in gardens and oases at Tehran and up to 8000 ft. in mountain-oases on the S. side of the Elburz range; also in gardens at Hamadan. Foodplant at Tehran, apparently a wild *Prunus* common in gardens there. Absent from S. Persia, even at heights.

In 1931 Pfeiffer wrote in his Marash Fauna (*Mitt. Muench. Ent. Ges.*, e.V, XXI, Jahrg., Heft II) as follows (my translation):—"The locality Gulheck (Gulhack) mentioned by Verity in this work must be identical with Gulek in the Taurus and cannot be situated in Persia; therefore the race here under consideration must be called *persica*, Vty."

Perhaps when Herr Pfeiffer himself visited Tehran in 1936 he realised his mistake, but if he ever published a correction I have not seen it. Gulheck is of course one of a group of villages to the North of Tehran, sometimes collectively referred to as Shrimran; these villages contain the summer gardens and residences of the people of Tehran city, and are situated about 1000 ft. higher, half-way up the long gravel slopes which link Tehran with the more precipitous slopes of To-Chal, the Elburz peak dominating the city. Many records from "Tehran" undoubtedly refer to these villages rather than the city itself.

Pfeiffer's determination of the Marash race of *podalirius* is thus seen to be based on a gratuitous false assumption, though perhaps the Marash race is identical with the Persian. The Turkish name Gulek means "little lake," whereas the Persian "Gulheck" means flowery. Even without a knowledge of these languages, a little more caution might have been observed in a part of the world so full of places with identical names as the Middle East, and the existence of a Persian locality should not have been denied just because its name is, not identical, but, to a foreigner, similar to the name of a place in Turkey!

[*Papilio alexanor*, Esp. ssp. Kuh Barfi and Kuh Bamu, 8000-9000 ft., Shiraz, Fars, one brood in v. At Upper Heights only.]

This species was recorded about 100 years ago from S.W. Persia by Kollar among the 49 species of Lepidoptera taken by Kotschy in 1942 around Shiraz (*Akad. Math.-Nat. Wien Denkschr.*, 1). Since Dr A. Seitz gives for *alexanor* "eastward to E. Persia and Turkestan," perhaps he doubted Kollar's identification or overlooked the record, which the above two records now confirm. Some of Kollar's identifications were certainly doubtful (e.g. *Gonepteryx rhamni*, L., probably should be *farinosa*, Z.), but on the whole that first work on Fars Lepidoptera and geography still holds good, considering its age.]

(*Thais cerysi*, God., ssp. *louristana*, Le C. Ardekan, 4.v, Fars, at 7000 ft. The first rediscovery since the types of the race were caught further North-west along the Zagros. Bare slopes, but not peaks. This appears to be the southernmost locality of this species, whether on the Zagros Range or in Palestine and Transjordan, where the race-form is less aberrant than in S.W. Persia.)

1. *Euchloë cardamines*, L. ssp. To-Chal (S. side of Elburz), 8-10,000 ft., 11.vi. Upper Heights. Pireh-Zan Pass, among oaks, 7000 ft., Fars, 7.iv. Kuh Barfi, Shiraz, Fars, 9000 ft., early v. Upper Heights. The Fars race is larger than the Elburz, otherwise similar.
2. *Satyrus circe*, L., ssp. *asiatica*, Seitz. Hamadan, 6000 ft., early vii. Oasis. The easternmost known locality.
3. *Pararge menava*, Moore ssp. Kuh Alvand, near Hamadan, Central Iran, 9000-11,000 ft. Upper Heights.
4. *Euphydryas aurinia*, L. To-Chal (S. side Elburz) 10,000 ft., 11.vi. Moist ground near spring at Upper Heights, one specimen only.

(*Melitaea arduinna*, Esp. ssp. Lar valley (S. side Elburz), 9000 ft., early vii. A large dull ♀. Shiraz, Fars, 5500 ft., at a spring; a vivid red series. Very local, and not found the next year, despite assiduous search.)

(*Melitaea sarvistana*, Wilts. Described in Wiltshire, 1941a (and illustrated), as a subspecies of *phoebe*, this race is closer to *sibina*, Alph., than *phoebe*, Knoch, and might be a distinct new species.)

(*Melitaea casta*, Koll. There are two easily differentiated races in Persia:—(1) ssp. *wiltshirei*, Higg. Higgins' types were taken on Mt Alvand, near Hamadan, at 7500 and 9000 ft., on 27.vii. The same form occurs on the high mountains near Ardekan, being recorded thence by Brandt under the name "*casta*, Koll.", and taken there myself at 11,000 ft. on 29.vi. It haunts steep screes at Upper Heights. (2) Presumably typical *casta*, Koll. This form, with the underside hindwing less clearly marked and suffused with cinnamon, flies on mountain-tops at 9000 and 10,000 ft. nearer Shiraz.)

(*Melitaea gina*, Higg. This species, which Higgins distinguished from true *didyma*, Ochs., was taken by Brandt above Sineh-Safid, and recorded as "*didyma*." Brandt informed me, *in litt.*, that he took the same species in the Elburz at Nissa, but since he said it was a different race, this Elburz race might be true *didyma*.)

HETEROCERA—ARCTIIDAE.

5. *Ocnogyna loewi*, Z. Kermanshah, W. Persia, c. 5000 ft., 18.xi. The larvae do not hatch at this altitude and latitude until early iii.

Deforested hillside. Sineh Safid, Fars, 6000 ft., 25.xi. A full-grown larva was seen there on 28.iv. Scrub-clad hillside. Pul-i-Fasa and west shores of Salt Lake, near Shiraz, 5000 ft., larvae common in ii. Steppe. Bushire, Fars, S.W. Iran, sea-level, larvae full-grown in late ii. Desert.

6. *Cletis maculosa*, Guen., ssp. *dahurica*, Boisd. To-Chal (S. side Elburz), 10,000 ft., 23.vii. Upper Heights.

LASIOCAMPIDAE.

7. *Chondrostega aurivillii*, Püng. ssp. Bushire, Fars (sea-level), larvae full-grown in ii. Shiraz, Fars, plain and low hills, 5000 ft., larvae full-grown in late iii and early iv. These conspicuous red-and-yellow and velvety black-banded, silky-haired caterpillars are called by the Persians of Fars "Gurbeh-i-No-Rooz" (=Pussies of New Year's Day) (Persian New Year begins March 21st), a most apt name. The race is probably *feisali*, Wilts., but I have been unable to verify this yet, not having obtained the imago, which flies in autumn. I am very familiar with this larva and moth from Iraq, and base my identification for Persia on the larvae. Habitat:—Desert and steppe.
8. *Lasiocampa grandis*, Rog. Khan-i-Zinian, 6000 ft., 20.ix. Salt Lake shores, near Shiraz, 5000 ft., 29.ix. Both localities in Fars; both scrub-clad hills.
9. *Lasiocampa terreni*, H.S. Luristan, 3500 ft., 29.x. Scrub-clad hills.
10. *Taragama siva*, Lef. Bushire, Fars, sea-level. I have seen larvae here feeding on *Zizyphus spina-christi* which I am sure are this species, having found it and bred it on this foodplant at Basra (Iraq). However, Brandt has reported a *Taragama* at Mian-Kotal (4000 ft., Fars) as *repanda*, Hbn., ssp. *alpherakyyi*, Chr. *Alpherakyyi*, Chr., was already known from N. Iran, being originally described as distinct from *repanda*, a N. African species. *T. siva*, both in its Iraqi and Indian form, differs from *repanda* and *alpherakyyi* most noticeably in its whitish hindwings. Since *Zizyphus* also grows at Mian Kotal, perhaps Brandt's record is really *siva*.

DREPANIDAE.

11. *Cilix glaucata*, Scop. Tehran, 5000 ft., 17 and 30.vii; 4.ix. Wild-growing gardens.

SPHINGIDAE.

12. *Deilephila nerii*, L. Tehran and Shiraz (N. Iran and S.W. Iran) gardens, 1.ix and 23 and 24.iv respectively.
13. *Dolbina elegans*, A. B. Haas. Gulhek, Tehran (5000 ft.), a single specimen taken at light on 29.viii in the British Legation garden by Mr Barnett. Evidently rare there. This seems to be the first recapture since the two types described in 1912 from Iskanderun (Alexandretta), Syria.

NOTODONTIDAE.

14. *Notodonta ziczac*, L. ssp. *pallida*, Grnb. Pasqaleh, 7000 ft., near Tehran, larvae found on willows by a mountain stream, 11.vi.39. Imagines hatched 20 and 25.vii.39 and 24.vi.40.

CYMATOPHORIDAE.

15. *Epimicelia theresiae*, Korb. Mt. Alvand, 9-10,000 ft., near Hamadan, 29.vi. Upper Heights.

AEGERIIDAE.

16. *Eusphacia pimplaeformis*, Obthr. Hamadan and Shiraz. Empty pupa cases found protruding from willows or poplars could only be this species, well-known to me from Iraq.

COSSIDAE.

17. *Zeuzera regia*, Stgr. Derband (S. side Elburz, 6000 ft.), near Tehran, 17.vi. Oasis. Hamadan, 7000 ft., 25.vi, 4.vii. Oasis. Pireh-Zan, Fars, 7000 ft., 15.vii. Oak-woods.
18. *Phragmatoecia castaneae*, Hbn. Ahwaz, Khuzistan, S.W. Iran, 250 ft., iv. Desert-oasis.

AGROTIDAE—MELICLEPTRIINAE.

19. *Melicleptria scutosa*, Schiff. Two specimens taken by Mr Barnett in N. Iran in viii, either in Tehran (oasis) or Chalus (forest land, Caspian coast); possibly from both.

AGROTINAE.

20. *Agrotis obesa*, Boisd., ssp. *fusca*, Corti Luristan, 29.x. Scrub woods, Middle Heights.
21. *Agrotis (Powellinia) lasserrei*, Obthr. Shiraz, shores of Salt Lake, x. Also on steppe, 2.xi.
22. *Agrotis (Ogygia) gracilis*, Wagn. (det. Boursin). Kuh Alvand, 7000-7500 ft., near Hamadan, Central Iran. Upper Heights.
23. *Agrotis (Ogygia) orientis*, Alph. Tehran, v-vi. Oasis, 4000 ft. Hamadan, vi. Oasis, 6000 ft. Yezd, Barfkhaneh, vi. 9000 ft., mountain-oasis. Shiraz, Fars, v. 5000 ft., oasis.
24. *Rhyacia xanthographa*, Schiff. Kermanshah, W. Iran, 14.x. Oasis, 5000 ft. Shiraz, Fars, 16.x. Oasis, 5000 ft. Pireh-Zan, Fars, S.W. Iran, ix, x. Oak woods.
25. *Rhyacia palaestinensis*, Kalchb. Kermanshah, 20.x. Oasis, 5000 ft.
26. *Triphaena orbona*, Hufn. N. Iran (probably Tehran), viii.
27. *Blepharita trisignata*, Men. Gulhek, Tehran, 5000 ft., larva seen in v in oasis. Kermanshah, W. Persia, 5000 ft., 31.x and 16.xi. Oasis. Luristan, 3500 ft., 29.x. Scrub-woods or oases at Middle Heights.

HADENINAE.

28. *Scotogramma trifolii*, Rott. Tehran, N. Iran, 13.vi. Oasis, 5000 ft. Hamadan, Central Iran, 23.vi. Oasis, 6000 ft.
29. *Polia thalassina*, Rott. Derband, near Tehran, 16.vi. Oasis, 6000 ft. Hamadan, Central Iran, 19.vi. Oasis, 7000 ft.
30. *Xylomania conspicillaris*, L. Derband (S. side Elburz), near Tehran, 6000 ft., 6.iv. Oasis. Sineh Safid, Fars, 6000 ft., to maple bloom, 15.iv; scrub, Upper Middle Heights. This specimen was f. *melaleuca*, View.

31. *Sideridis zae*, Dup. Near Ahwaz, Khuzistan, 14.x. Rank riverside vegetation at about 200 ft. (hot desert oasis).

CUCULLIINAE.

32. *Cucullia barthae*, Bours. Lar valley, S. side Elburz, 9000 ft. Larvae found on a dry-growing species of *Scrophularia* on calcareous ground, but not on neighbouring water-figwort in river-meadow, in early vii. Hatched in iv next year. So far only known at Upper Heights in Persia.
33. *Cucullia verbasci*, L. Lar valley, S. side Elburz, 9000 ft. Larva found in vii produced imago next 19.iv. Foodplant: *Verbascum*, growing on calcareous shingle-bed above flood-level in valley.
34. *Cucullia lychnitis*, Ramb. Tehran, 5000 ft. A larva found 24.vi produced adult next 8.v. Kuh Alvand, 7500 ft. (Asadabad pass), near Hamadan. Larvae common on 20.vii on *Verbascum*. Ardekan, Fars, 7000 ft., larvae seen on *Verbascum* at end of vi; apparently its southernmost limit. (Mulleins were searched further south in Fars.)
35. *Ulochlaena hirta*, Hbn. Hamadan, 6000 ft., 11.x and 30.x. Oasis. Kermanshah, common from 15.x to 25.xi. Oasis, but perhaps breeding on unirrigated ground. I presume this species also occurs along the Caspian coast of Persia, since I took a specimen in the Intourist Hotel, Baku (U.S.S.R.), on 8.xi.38.
36. *Aporophyla australis*, Boisd. ssp. Kermanshah, 23 and 28.x.
37. *Lithophane lapidea*, Hbn. At 8000 ft. above Lashkarek (S. side Elburz), larvae were beaten from *Juniperus oxycedrus*, L. I beat the junipers at Upper Heights in the S. Zagros in vain for this species.
38. *Xylina exsoleta*, L. Shiraz gardens, Fars, 5000 ft.; larvae full-grown in iv, adults in xi.
39. *Dryobotodes protea*, Esp., ssp. *incolorata*, Warr. Chihar Zibar Pass, near Kermanshah, H. Iran, 6.xi, 6000 ft. Oak scrub. Pireh-Zan, Fars, S.W. Iran, 20.x, 7000 ft. Oak woods.
40. *Antitype serpentina*, Tr. Shiraz Salt Lake, 29.x, 5000 ft. Steppe (Fars, S.W. Iran). Shapur, Fars, 20.xi. River-gorge, with scrub-clad sides.
41. *Cosmia ocellaris*, Bork., f. *palleago*, Hbn. Isfahan, Central Iran, 6000 ft., xi (f. *palleago*, Hbn., and a more orange form). Shiraz, S.W. Iran, 5000 ft., xii.

ACRONYCTINAE.

42. *Simyra dentinosa*, Frey. Barfkhaneh, near Yezd, Central Iran, 5.vi. Upper Heights, 11,000 ft. Pireh-Zan, Fars, S.W. Iran, 7.iv. Oak woods.

ZENOBIIINAE.

43. *Mania maura*, L. Shiraz, S.W. Iran, 6.vi. Oasis, 5000 ft.
44. *Parastichtis rurea*, F. Gulhek, Tehran, 13.v, 5000 ft. Oasis.
45. *Stilbina hypaenides*, Stgr. Luristan, 3000 ft., 29.x. Semi-deforested woodland. Shapur, S.W. Iran, 3000 ft., 19.xi. Intermediate biotope between oak scrub zone and plain with *Zizyphus* and date-palms.

46. *Phragmitiphila typhae*, Thnbg. Shiraz, S.W. Iran, 5500 ft., 12.vi to 15.viii. Marshy stream.
47. *Arenostola sohn-retheli*, Püngl. Shiraz, 5500 ft., 19.vi. Marshy stream.
48. *Archanaera algae*, Esp. (*cannae*, O.), ssp. Shiraz, 5500 ft., 12-19.vi. A rather constant, rosy race, with pale hindwings.
49. *Porphyrinia conistrotata*, Hamps., and
50. *Porphyrinia supuncta*, Stgr. Both at Hamadan, Central Iran, 20.vii. 7000 ft., mountainside with stream.

EUTELIANAE.

51. *Eutelia adoratrix*, Stgr. Derband, near Tehran, 6000 ft., oasis, 13.vi and 10.viii.

CATOCALINAE.

52. *Anua tirhaea*, C. Kuh Sivand, Fars, S.W. Iran, 8000 ft. Larvae seen on *Pistacia*, Upper Heights (wooded).

PHYTOMETRINAE.

53. *Phytometra deaurata*, Esp. Hamadan, Central Iran, 7000 ft., 1.viii. Oasis.
54. *Phytometra chrysitis*, L. Tehran, N. Iran, 5000 ft., 9.viii. Oasis (ab. *disjuncta*, Schultz).

HYPENINAE.

55. *Syneda herzi*, Alph. Derband, near Tehran, 6000 ft., 16.vi. Oasis.
56. *Hypena munitalis*, Mann. Lar valley, vii, 9000 ft. Upper Heights.

GEOMETRIDAE—OENOCHROMINAE.

57. *Aplasta ononaria*, Fuessl. Kuh-i-Chavireh Shah, 7000 ft.; Luristan, Upper Middle Heights; 12.vi.
58. *Orthostixis cribraria*, Hbn., ssp. *amanensis*, Wehrli. Chalus woods, Mazanderan, N. Persia, 10.viii (leg. Barnett). Sea-level, forest-clad shores of Caspian.

STERRHINAE.

59. *Sterrha consanguinaria*, Boisd. Gulhek, Tehran, N. Iran, 16.vi. Oasis. Hamadan, Central Iran, 6000 ft., 19 and 25.vi. Oasis (det. Prout). Kuh-i-Chavireh Shah, 7000 ft.; Luristan, W. Iran, 12.vi. Upper Middle Heights (det. Prout).
60. *Sterrha trigeminata*, Haw., ssp. Gulhek, Tehran, 5000 ft., 15.viii. Oasis

LARENTIINAE.

61. *Lithostege amoenata*, Christ. (det. Prout). Kuh Alvand, Hamadan, Central Iran, 29.vi, 9000 ft. Upper Heights.
62. *Xanthorhoë fluctuata*, L. Hamadan, 6000 ft., 4.vii. Oasis. Khorramabad, Luristan, W. Iran, 4000 ft., 3.iv. Deforested Middle Heights with gardens (oasis).
63. *Xanthorhoë designata*, Hufn. Gulhek, Tehran, 5000 ft., 15.vi. Oasis.

GEOMETRINAE.

64. *Ennomos fuscantaria*, Steph. Derband, near Tehran, N. Iran, 6000 ft., 16.viii. Oasis. Gulhek, Tehran, 5000 ft., 25.vi. Oasis (ab. *effuscaria*, Reb.).
65. *Ennomos erosaria*, Schiff. Shiraz, S.W. Iran, 5000 ft., 25.vii. Oasis.
66. *Colotois pennaria*, L. Gulhek, Tehran, 5000 ft. Oasis. Larvae mature in v.
67. *Dasycorsa modesta*, Stgr. Khorramabad, Luristan, 4000 ft. Deforested Middle Heights.
68. *Eilicrinia trinotata*, Metz. Gulhek, Tehran, N. Iran, 5000 ft., v, vi, vii, viii. Oasis. The grey typical form in v; the yellow f. *aestiva*, Reb., from vi onwards.
69. *Zamacra flabellaria*, Heeg. Bushire, Fars, sea-level. Found dead in spider's web in ii. Hot desert (maritime), with a few gardens. Persian Gulf.
70. *Gnopharmia irakensis*, Wehrli. Kuh Alvand, near Hamadan, 9000 ft., 20.vii. Upper Heights (det. Wehrli). I have similar specimens from many Iranian localities but their genitalia have not yet been examined.

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A FURTHER EXTENSION OF THE RANGE OF MYRMICA SCHENKI, EMERY.

By FERGUS J. O'ROURKE, F.R.E.S.

D. P. Walls (6) recently recorded the occurrence of the rare ant *Myrmica schenki*, Emery, at Portmarnock, Co. Dublin. This species, which is found locally throughout the Palaearctic and Nearctic regions north of 40° North Latitude, had previously been recorded from only four stations in these islands; of these, three are located in Ireland—viz., Maherabeg, Co. Wicklow (4), Kilcarr Bridge and by the River Slaney near Kildavin, Co. Carlow (5)—the fourth station, the only British one, is at Sully, Glamorgan (1). Another hitherto unrecorded station is in the demesne at Glengarriff, West Cork, where A. W. Stelfox, to whom I am indebted for permission to publish it, swept a female in July 1935. Thus all the stations in this country occurred in the South and East, it was therefore of interest to find that the ant occurred also in the West of Ireland at Roundstone, Co. Galway, which is the most westerly record for Europe (9° 50' W. long.) and also together with the Portmarnock one appears to be the most northerly (I have however been unable to check some references). In 1944 on 14th July at Roundstone I found a worker *schenki* foraging on the surface of a narrow road, but despite a careful search the location of the nest could not be found. I was greatly surprised when a few minutes later my brother Angus handed me another worker of this species picked up running about among worker *Formica fusca*, L., on bare rock in damp peaty ground some 200 yards away. A search here also failed to locate the nest. Thenceforth a careful search was made for nests in the area around Roundstone and later some workers were seen foraging at an altitude of 200 feet on Errisbeg Mountain. A diligent search revealed a nest about 100 yards away. It is of course extremely unlikely that the workers seen came from this nest for the maximum foraging distance for the allied species *Myrmica scabrinodis*, Nyl., is 20 feet, giving a feeding territory of 140 square yards [W. Pickles (2)]; were the foraging distance 100 yards the feeding territory would exceed 7 acres, which seems hardly likely since the population would not be more than three or four thousand (2).

The nest was quite different from that at Portmarnock which Mr Walls kindly showed me on 3rd September 1942, and which fitted the